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Field notes on New Caledonian raptors with particular reference to *Haliastur sphenurus*

by

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Apart from *Pandion haliaetus*, still fairly abundant along coasts and on islets, there are five species of Accipitriformes in New Caledonia: *Falco peregrinus nesiotes* Mayr, 1941, *F. fasciatus vigilax* (Wetmore, 1926), *Circus approximans* Peale, 1848 and *Haliastur sphenurus* (Vieillot, 1818).

Falco peregrinus nesiotes is a very rare bird on the island. I was able to identify it three times during an eleven months' period of intensive ornithological work (1971, and 1975—1979). Once a bird was flying straight from one island to the other in the straits between new Caledonia and the Isle of Pines (extreme south of the archipelago where extensive *Araucaria* trees grow on coral reefs). On another occasion, in the central part of the main island, a large female had just been killed by a farmer after diving repeatedly on poultry. In a lonely place in the mountains of the same district a pair was observed calling and screaming for an hour: it apparently had its breeding quarters on some ledges of a nearby rocky slope.

Accipiter haplochrous is fairly common in dense forest and gallery forest. It often perches a few meters above the ground on a branch, watching motionless. It nests on trees and it preys on small birds. I found passerines like *Zosterops* sp. in its stomach. Its hunting territories encroach very little upon those of the following species (narrow overlap along forest edges). Laying takes place during the months of September to October.

Accipiter fasciatus vigilax lives and breeds outside the thick rainforest but is common in the more open Niaouli woods, in which the trees (*Melaleuca leucodendron*, Myrtaceae) are only four to twelve meters high. As noticed by Macmillan (unpubl. diary, A.M.N.H., New York), the bird uses to stand motionless on branches, five to ten meters above the ground, often along roads and paths, watching for small rodents and lizards. During the time they have chicks in the nest they can be seen commonly sitting on top of telephone poles. They build their nests on trees like *A. haplochrous*. Eggs are laid earlier, from August to September.

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[1] To my friend Dr. H.E. Wolters as a special hommage for his 70th anniversary.

At first glance the habitat of *Circus approximans* seems to be entirely different: fields, cultivations, grasslands, heath on slopes, also marshy plains, which it ceaseless surveys as is the rule in this genus. It also frequents large clearings and meadows enclosed in Niaouli forest. I even met it in degraded forests with stunted, spaced out trees; for instance in the north of the island, where extensive Niaouli forests have been repeatedly devastated by fires. In these areas the territories of *Circus approximans* evidently do not overlap whith those of *Accipiter haplochrous* but encroach upon those of *A. fasciatus. C. approximans* feeds on batrachians and rodents, but also to an astonishing amount on lizards. Once, just before sunset, I found in a stomach no less than twenty-five lizards, ten to twenty centimeters in length.

Haliastur sphenurus is still more electic both in biotopes and diet. Inland it can be seen up to an altitude of 1000 m or more; but at low altitudes it is much more abundant, especially in the western parts of the island, where slopes are more gentle and plateaus more extensive. Authors like the Layards (1878, 1880, 1982), Macmillian (Notes, A.M.N.H.) and Warner (1947) have seen it mainly on the coastal plains and on small islands close to the "Grande Terre". Macmillian mentions large flocks of several dozens at a time! I noticed such large groups only two or three times, but could never discover a reason for such concentrations as no offal or cattle carcass was to be seen there. Thus the habitat of *H. sphenurus* coincides largely with that of *Circus approximans* (open forest and savanna) and, to a lesser extent, with that of *Accipiter fasciatus.* The diet is also very varied, including grashoppers, fish, rats, lizards, some poultry, and much carrion (The Layards, Warner, and pers. observ.). A similar variety of food items is the rule with *Milvus migrans* in Europe and North Africa.

I found and examined ten eyries, all in trees and mostly on lateral branches. Two of them were found on islets: one, at sea level, was well hidden in dense scrub of Gaiac trees (*Acacia spirorbis* Labill.) at a height of five meters; the other was in open country, on a Niaouli tree, at a height of six meters. Other nests were found on the main Island in a variety of localities and situations. In one case the bulky nest had been built close to the top of a large, isolated tree, and therefore could be easily sighted from a road a mile away. Another eyrie in the same district was difficult to see: right in the middle of a group of very large trees, sixteen meters high above a creek. Further north, in a muddy and well watered depression where huge Niaouli trees were growing (a special variety adapted to flooded ground), there was again a large eyrie twelve meters above the ground, that could not be seen until the tree itself had been reached; the owner of the nest was incubating. Three more eyries were found in the extreme north of the Island, among the intertidal flats of the Diahot Bay. Two of them had been placed only a few meters high on Gaiac trees growing on firm, dry ground; the third one, nearly invisible even at close quarters, was on a *Casuarina* tree close to the mangrove. Of great interest was another breeding place further north and far offshore, in the Belep Archipelago. There, although

potential nesting sites were abundant everywhere on larger islands, the birds had chosen a rocky, scarcely wooded islet!

Only three of the occupied eyries could be reached. As was to be expected they were made of twigs and sticks (Less than three centimeters thick). The cups were fairly deep — (5—8 cm) — and lined with fresh leaves of Gaica or Niaouli, a type of construction that ist more like that of *Buteo* or *Accipiter* than that of *Milvus*, Kites' nests being rather flat plates, lined with rags and paper (I once found a banknote).

Two or three eggs make the normal clutch. The eggs are much more similar to those of *Milvus* sp. than to those of other raptors: *Hieraaetus pennatus* lays bluish eggs with very few tiny spots; *H. fasciatus* has white eggs with pale ochreous blotches; *Buteo* sp. also white eggs with darker spots. Only *Milvus* eggs are marked not only with spots but also with hair-like filaments: this is the pattern I found on most eggs of *Haliastur* found in New Caledonia and Australia (Britisch Museum collections).

According to my findings, the breeding season in New Caledonia extends from July to December.

In the Diahot basin I often saw *Haliastur sphenurus* perching for long periods on dead branches, silent, motionless, and watching. Herons, Egrets, Ducks and Gulls were fishing and roosting all around. After an hour or so, *Haliastur* would take wing, reach a height of twenty to thirty meters and begin circling at low speed, calling loudly.

At my first visit in New Caledonia, not being well acquainted with *Haliastur sphenurus* and still unaware of Dean Amadon's study of the morphology of this species (Amadon 1941), I could not imagine any sort of affinity between this bird and Kites. But as soon as I met with it in the Diahot districts I heard its "whinnying" (or "neighing"), strikingly similar to the one of *Milvus migrans*, with just a little more piercing sound. At once all resemblances became striking for me: diversity in habitats (dense forest being excluded); eclectism in food and nest sites; similarity in eggs; and above all similarity in the „quality" of the calls. I now feel convinced of the reality of a relationship — not a mere convergence — that should be investigated thoroughly, corroborating the resemblances in morphology put in evidence by D. Amadon.

Summary

Habitats, behaviour and ecological niches of New Caledonian raptors are described and compared in outline. *Falco peregrinus*, very rare, stands well apart; *Accipiter haplochrous* and *A. fasciatus* occupy different habitats, without overlap except at the limit between dense rainforest (*A. haplochrous*) and other woody regions. *Circus approximans*' niche is similar to that of *Circus* elsewhere. *Haliastur sphenurus* avoids dense forest and shows an interesting resemblance with *Milvus migrans*, as far as morphology (D. Amadon), ecology and behaviour are concerned.

Zusammenfassung

Habitate, Verhaltensweisen und ökologische Nischen neukaledonischer Greife werden beschrieben und kurz verglichen. Der seltene *Falco peregrinus* steht deutlich abseits; *Accipiter haplochrous* und *A. fasciatus* bewohnen verschiedene Habitate und treffen sich nur an der Grenze zwischen Regenwald und anderen Waldgebieten. die Nische von *Circus approximans* entspricht der in der Gattung üblichen. *Haliastur sphenurus* vermeidet dichten Wald und die Art weist eine interessante Ähnlichkeit zu *Milvus migrans* auf, soweit es die Morphologie (D. Amadon), Ökologie und das Verhalten betrifft.

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